

REMARKS

Status of the Claims:

Claims 1, 5-12, 23, 26, and 42-64 have been amended. Claims 65-68 have been added. After amending the claims as set forth above, claims 1-68 are now pending in this application.

I. Claim Rejections – 35 U.S.C. § 102 - Schmidt

Claims 1-3, 12, 26, 42, 49-52, and 54-60 have been rejected under 35 U.S.C. 102(e) as being anticipated by Schmidt (USPGPUB 2002/0193836). These rejections are respectfully traversed in view of the claims as amended herein.

Independent claim 1, as amended, recites a method of sensing multiple parameters comprising:

implanting an implantable sensor at a single site in a patient, the implantable sensor having a housing within which are disposed a plurality of implantable sensing elements, each implantable sensing element of the plurality of implantable sensing elements operable through electrical communication with an external controller via a respective interconnect of a plurality of interconnects, each respective interconnect of the plurality of interconnects independently connected to a respective implantable sensing element of the plurality of implantable sensing elements, each implantable sensing element of the plurality of implantable sensing elements located within the housing of the implantable sensor, each implantable sensing element of the plurality of implantable sensing elements for sensing within the housing of the implantable sensor at least one of a respective biological parameter, a respective physiological parameter, and a respective analyte; and

reading an output from at least one implantable sensing element of the plurality of implantable sensing elements;

wherein a plurality of parameters are read from the implantable sensor at the single site;

wherein the output read from the at least one implantable sensing element of the plurality of implantable sensing elements is a quantifiable value; and

wherein the plurality of interconnects are equal in number to the plurality of implantable sensing elements.

(Similar features are found in independent claim(s) 26 and 42¹.)

Claim 1 is neither taught, suggested, nor rendered predictable by the Schmidt reference.

In particular, claim 1 recites a method that includes, among other features, each implantable sensing element of the plurality of implantable sensing elements located within the housing of the implantable sensor, each implantable sensing element of the plurality of implantable sensing elements for sensing within the housing of the implantable sensor at least one of a respective biological parameter, a respective physiological parameter, and a respective analyte.

Thus, (i) each of the implantable sensing elements are located within the housing of the implantable sensor (ii) for sensing at least one parameter/analyte within the housing of the implantable sensor. The Schmidt reference does not disclose or suggest a method, as recited in claim 1, including these features.

According to the Examiner, the Schmidt reference discloses:

implanting an implantable sensor at a single site in a patient, (e.g. Figures 3-4), wherein the implantable sensor has a housing within which are disposed a plurality of implantable sensing elements (e.g. electrode bands 10 capable of sensing a variety of different parameters including heart rate, QRS duration, and AV delay) and wherein the implantable sensing elements are operable through electrical communication with an external controller via a respective interconnect of a plurality of interconnects, each of the interconnects independently connect to a respective one of the implantable sensing elements (e.g. Figure 3); each sensing element capable of sensing a respective physiological parameter (e.g. each electrode 10 is capable of sensing cardiac metrics which will be different for each electrode as they are located in slightly different locations and are quantifiable values; Col. 3, Paragraph 36), reading an output from at least one implantable sensing element from a single site that is a quantifiable value, evaluating the patient based on the output, and administering therapy based on the output (e.g. Figure 10 wherein at step 106 the cardiac metrics are measured and therapy is determined based on the metric measured).

¹ Similar features are also found in independent claim 43, which will be discussed later.

See p. 2 l. 19 to p. 3 l. 8 of the Office Action dated April 23, 2009 (*Office Action*).

However, in contrast to amended claim 1, the implantable sensing elements of the Schmidt reference are neither located within the housing of the implantable sensor nor are the implantable sensing elements for sensing at least one parameter/analyte within the housing. Indeed, the electrode bands (10) of the Schmidt reference are located on the outer periphery of — and not inside — the implant. See, e.g., FIG. 3 and [0054] of the Schmidt reference. Moreover, the electrode bands are located on the outer periphery of the implant to allow the electrode bands to contact cardiac tissue to sense cardiac activity external to the implant and provide cardiac pacing. See Abstract of the Schmidt reference; see also new claims 65-68 of the pending application. As such, the electrode bands cannot be positioned anywhere, but on the outer periphery of the implant, as the electrode bands would not be able to contact cardiac tissue.

As such the Schmidt reference does not disclose or suggest a method including implanting an implantable sensor having implantable sensing elements such that (i) each of the implantable sensing elements are located within the housing of the implantable sensor (ii) for sensing at least one parameter/analyte within the housing of the implantable sensor.

Accordingly, the Schmidt reference does not anticipate claim 1.

Therefore, for at least the reasons above, the Schmidt reference does not anticipate, suggest, or render predictable independent claims 1, 26, and 42. Claims 2, 3, 12, 49, 51, and 59 depend from claim 1 (directly or indirectly) and are believed to be allowable for at least the same reasons as claim 1 is believed to be allowable. Claims 50 and 52, depend from claim 26 (directly or indirectly) and are believed to be allowable for at least the same reasons as claim 26 is

believed to be allowable. Claims 54-58, depend from claim 42 (directly or indirectly) and are believed to be allowable for at least the same reasons as claim 42 is believed to be allowable. Accordingly, the rejections of claims 1-3, 12, 26, 42, 49-52, and 54-60, as amended herein, are respectfully traversed.

II. Claim Rejections – 35 U.S.C. § 103

A. The Schmidt reference

Claims 13-25 and 34-41 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt. These rejections are respectfully traversed in view of the claims as amended herein.

Claims 13-25 and 34-41 depend from claim(s) 1 and 26 (directly or indirectly) and are believed to be allowable for at least the same reasons as claims 1 and 26 are believed to be allowable. Specifically, as discussed above, the Schmidt reference does not disclose a method of sensing multiple parameters including implanting an implantable sensor having implantable sensing elements such that (i) each of the implantable sensing elements are located within the housing of the implantable sensor (ii) for sensing at least one parameter/analyte within the housing of the implantable sensor. The combinations suggested by the Examiner does not address any of these features.

To establish a prima facie obviousness of a claim invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981 (CCPA 1974). Because the Schmidt reference fails to disclose or suggest the recited features, there can be no prima facie obviousness by seeking to combine the Schmidt reference with the combinations suggested by the Examiner. Thus,

claims 13-25 and 34-41 are believed to be allowable. Accordingly, the rejections of claims 13-25 and 34-41, as amended herein, are respectfully traversed.

B. The Schmidt and Gord References

Claims 4-11, 13-25, 27-33, 34-41, 43-48, 53, and 61-64 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt and Gord et al (USPN 5,999,848) (Gord). These rejections are respectfully traversed in view of the claims as amended herein.

Claims 4-11, 13-25, 27-33, 34-41, and 62-64 depend from claim(s) 1, 26, and 42 (directly or indirectly) and are believed to be allowable for at least the same reasons as claim(s) 1, 26, and 42 are believed to be allowable. Independent claim 43 is similar to claims 1, 26, and 42, and is believed to be allowable at least for the reasons discussed above with respect to claims 1, 26, and 42. Claims 44-48, 53, and 61 depend from claim 43 (directly or indirectly) and are believed to be allowable for at least the same reasons as claim 43 is believed to be allowable.

Specifically, as discussed above, the Schmidt reference does not disclose a method of sensing multiple parameters including implanting an implantable sensor having implantable sensing elements such that (i) each of the implantable sensing elements are located within the housing of the implantable sensor (ii) for sensing at least one parameter/analyte within the housing of the implantable sensor.

According to the Examiner, the Gord reference discloses “discloses an implantable sensor wherein reading/evaluating a patient based on an output from at least one of an implantable sensing elements comprises reading an output from an implantable sensing element that responds to glucose (e.g. Col. 7, lines 30-33 and 45-48), temperature (e.g. Col. 7, lines 30-34), or Ph (e.g.

Col. 7, lines 30-33).” See p. 5 ll. 8-15 of *Office Action*. However, the cited portions do not address each of the features previously discussed.

To establish a prima facie obviousness of a claim invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981 (CCPA 1974). Because none of the references disclose or suggest the recited features, there can be no prima facie obviousness by seeking to combine these references. Thus, claims 4-11, 13-25, 27-33, 34-41, 43-48, 53, and 61-64 are believed to be allowable.

Accordingly, the rejections of claims 4-11, 13-25, 27-33, 34-41, 43-48, 53, and 61-64 as amended herein, are respectfully traversed.

III. New Claims:

New claims 65-68 are added to further protect additional features of the present invention.

Claim 65 generally recites, among other features, the housing having an aperture for allowing each implantable sensing element of the plurality of implantable sensing elements to sense within the housing of the implantable sensor the at least one of a respective biological parameter, a respective physiological parameter, and a respective analyte. This claim is supported by the original application, for example, at paragraph(s) [0036] and [0029] disclosing the housing having an aperture for allowing fluids to contact the sensor elements. This claim is not disclosed in the cited reference(s). Moreover, this claim is believed to be allowable at least for the reasons of its parent claims and/or the reasons previously discussed.

Claim 66 generally recites, among other features, the aperture for allowing fluid to pass into a volume inside the housing of the implantable sensor to allow each implantable sensing element of the plurality of implantable sensing elements to sense within the housing of the implantable sensor the at least one of a respective biological parameter, a respective physiological parameter, and a respective analyte. This claim is supported by the original application, for example, at paragraph(s) [0036] and [0029] disclosing the housing having an aperture for allowing fluids to contact the sensor elements. This claim is not disclosed in the cited reference(s). Moreover, this claim is believed to be allowable at least for the reasons of its parent claims and/or the reasons previously discussed.

Claim 67 generally recites, among other features, wherein each implantable sensing element of the plurality of implantable sensing elements is disposed completely within the housing of the implantable sensor. This claim is supported by the original application, for example, at Fig(s). 1 and 2 (and the accompanying text) disclosing that each of the implantable sensing elements are disposed completely within the implantable sensor. This claim is not disclosed in the cited reference(s). Moreover, this claim is believed to be allowable at least for the reasons of its parent claims and/or the reasons previously discussed.

Claim 68 generally recites, among other features, wherein each respective interconnect of the plurality of interconnects connects with the respective implantable sensing element inside the housing of the implantable sensor. This claim is supported by the original application, for example, at Fig(s). 1 and 2 (and the accompanying text) disclosing that each interconnect connects with its respective implantable sensing element inside the housing of the implantable

sensor. This claim is not disclosed in the cited reference(s). Moreover, this claim is believed to be allowable at least for the reasons of its parent claims and/or the reasons previously discussed.

IV. Conclusion:

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

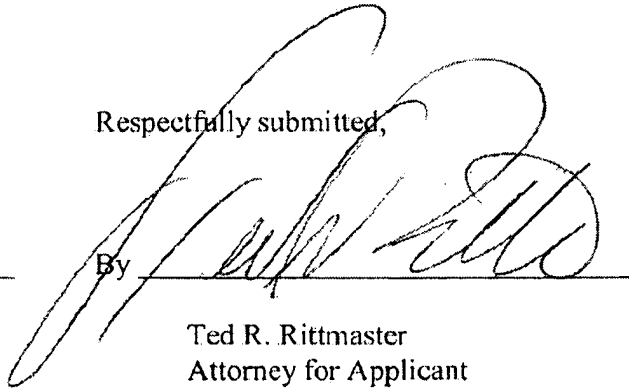
Date

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FOLEY & LARDNER LLP
Customer Number: 23392
Telephone: (213) 972-4594
Facsimile: (213) 486-0065

Respectfully submitted,

By



Ted R. Rittmaster
Attorney for Applicant
Registration No. 32,933